

REMARKS

This Amendment addresses the outstanding Office Action dated February 19, 2010. Applicants respectfully request favorable reconsideration of this application, as amended.

By this Amendment, Claims 1, 8, and 17 have been amended to more particularly recite subject matter which Applicants regard as the invention and as discussed in detail below. Claim 17 has also been amended to include subject matter of Claim 18 (now cancelled without prejudice or disclaimer). Claims 2-6 and 10-16 have also been cancelled without prejudice or disclaimer to reduce the issues, thus rendering as moot the rejection under 35 U.S.C. § 112.

New Claim 19 has been added to provide further protection for Applicants' invention. Support for Claim 19 is provided, for example, at page 31, lines 2-5 of Applicants' disclosure.

Thus, Claims 1, 7-9, 17, and 19 are pending.

Turning to the merits, in the Office Action Claims 1-2, 4-6, 10-11, and 14-15 were rejected under 35 U.S.C. § 103 over Ovshinsky; Claims 8 and 17 were rejected under 35 U.S.C. § 103 over Ovshinsky in combination with Kinoshita; Claims 9 and 18 were rejected under 35 U.S.C. § 103 over Ovshinsky and Kinoshita in further combination with Yamada;

Claims 3 and 12-13 were rejected under 35 U.S.C. § 103 over Ovshinsky in combination with Schneider; and Claims 7 and 16 were rejected under 35 U.S.C. § 103 over Ovshinsky in combination with Morikawa.

Without acceding to the rejections, Claim 1 now recites, *inter alia*, a memory layer . . . and a region adjacent to the memory layer, in which the content of Zn or Cd is higher by 10 at% or more than that of the memory layer. Support for the amendment is provided, for example, at page 41, lines 9-18 of Applicants' disclosure. It is apparent that the applied references do not teach or suggest this feature.

For example, the primary reference, Ovshinsky, is directed to a multi-terminal logic device that includes a phase change material. See Ovshinsky, paragraph [0029]. The cited portion of Ovshinsky teaches that chalcogenide materials are used as the phase change material. Ovshinsky, paragraph [0031] to [0032]. However, Ovshinsky's device is disclosed as only having one layer of such chalcogenide material. Ovshinsky, paragraphs [0043] to [0044]; and FIGS. 2 and 3 (items 380 and 210, respectively). Thus, it is apparent that Ovshinsky does not teach or suggest a device having a memory layer . . . and a region adjacent to the memory layer, in which the content of Zn or Cd is higher by

10 at% or more than that of the memory layer, as recited in Claim 1.

The secondary references are not understood as remedying the above-noted deficiency of Ovshinsky, nor does the Office Action rely on the secondary references for such teaching.

Therefore, Applicants respectfully submit that Claim 1 distinguishes patentably from the applied references.

Claim 8 also recites, *inter alia*, a memory layer . . . and a region adjacent to the memory layer, in which the content of Zn or Cd is higher by 10 at% or more than that of the memory layer.

Accordingly, Applicants respectfully submit that Claim 8 also distinguishes patentably for at least the same reasons discussed above with respect to Claim 1.

Furthermore, Claim 17 now recites, *inter alia*, that an insulating layer is disposed between the memory layer and one surface of one said electrode. Support is provided, for example, at page 31, lines 2-5; and FIG. 10 of Applicants' disclosure. It is apparent that the applied references do not teach or suggest this feature.

For example, the Office Action acknowledges at page 6 that primary reference Ovshinsky and secondary reference Kinoshita do not teach or suggest this feature. Secondary

reference Yamada is also not seen as teaching or suggesting this feature.

For example, the cited portion of Yamada teaches an information recording medium composition in which a recording layer (4) is sandwiched between two dielectric thin films (2, 3). Yamada, col. 2, lines 62-65; and FIGS. 1A and 1C. However, Yamada is not seen as teaching or suggesting that an insulating layer is disposed between the memory layer and one surface of one (said) electrode, as recited in Claim 17.

The remaining secondary references are not seen as remedying the above-noted deficiency of Ovshinsky, Kinoshita, and Yamada, nor does the Office Action rely on the remaining secondary references for such teaching.

Therefore, Applicants respectfully submit that Claim 17 also distinguishes patentably from the applied references.

Dependent Claims 7, 9, and 19 are also believed to be patentable at least due to their respective dependence from Claims 1, 8, and 17, as well as for the additional subject matter recited in Claims 7, 9, and 19.

Accordingly, a Notice of Allowance is respectfully requested.

The Commissioner is hereby authorized to charge to Deposit Account No. 50-1165 (XA-10616) any fees under 37 C.F.R. §§ 1.16 and 1.17 that may be required by this paper and to credit any overpayment to that Account. If any extension of time is required in connection with the filing of this paper and has not been separately requested, such extension is hereby requested.

Respectfully submitted,

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